```
DDDDDDDDDDDD     UUU         UUU  MMM         MMM  PPPPPPPPPPPP
DDDDDDDDDDDDD    UUU         UUU  MMM         MMM  PPPPPPPPPPPPP
DDDDDDDDDDDDD    UUU         UUU  MMM         MMM  PPPPPPPPPPPPP
DDD          DDD UUU         UUU  MMMMMMM   MMMMMM  PPP         PPP
DDD          DDD UUU         UUU  MMMMMMM   MMMMMM  PPP         PPP
DDD          DDD UUU         UUU  MMMMMMM   MMMMMM  PPP         PPP
DDD          DDD UUU         UUU  MMM  MMM  MMM  MM  PPP         PPP
DDD          DDD UUU         UUU  MMM  MMM  MMM  MM  PPP         PPP
DDD          DDD UUU         UUU  MMM  MMM  MMM  MM  PPP         PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPPPPPPPPPPPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPPPPPPPPPPPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPPPPPPPPPPPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDD          DDD UUU         UUU  MMM       MMM  MM  PPP
DDDDDDDDDDDD     UUUUUUUUUUUUUUU  MMM       MMM  MM  PPP
DDDDDDDDDDDDD    UUUUUUUUUUUUUUU  MMM       MMM  MM  PPP
DDDDDDDDDDDDD    UUUUUUUUUUUUUUU  MMM       MMM  MM  PPP
```

FILEID**DUMPFILE

```
DDDDDDDD    UU      UU  MM      MM  PPPPPPPP    FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE
DDDDDDDD    UU      UU  MM      MM  PPPPPPPP    FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE
DD      DD  UU      UU  MMMM  MMMM  PP      PP  FF              II      LL          EE
DD      DD  UU      UU  MMMM  MMMM  PP      PP  FF              II      LL          EE
DD      DD  UU      UU  MM  MM  MM  PP      PP  FF              II      LL          EE
DD      DD  UU      UU  MM  MM  MM  PP      PP  FF              II      LL          EE
DD      DD  UU      UU  MM      MM  PPPPPPPP    FFFFFFFF        II      LL          EEEEEEEE
DD      DD  UU      UU  MM      MM  PPPPPPPP    FFFFFFFF        II      LL          EEEEEEEE
DD      DD  UU      UU  MM      MM  PP          FF              II      LL          EE
DD      DD  UU      UU  MM      MM  PP          FF              II      LL          EE
DD      DD  UU      UU  MM      MM  PP          FF              II      LL          EE          ....
DD      DD  UU      UU  MM      MM  PP          FF              II      LL          EE          ....
DDDDDDDD    UUUUUUUUUU  MM      MM  PP          FF          IIIIII    LLLLLLLLLL  EEEEEEEEEE  ....
DDDDDDDD    UUUUUUUUUU  MM      MM  PP          FF          IIIIII    LLLLLLLLLL  EEEEEEEEEE  ....

LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

```
;     1          0001  0 MODULE DUMP$FILE (
;     2          0002  0         IDENT='V04-000',
;     3          0003  0         ADDRESSING_MODE(EXTERNAL=GENERAL,
;     4          0004  0                 NONEXTERNAL=LONG_RELATIVE)
;     5          0005  0         ) =
;     6          0006  1 BEGIN
;     7          0007  1 !
;     8          0008  1 !
;     9          0009  1 !*****************************************************************************
;    10          0010  1 !*                                                                           *
;    11          0011  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
;    12          0012  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                    *
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;    19          0019  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY     *
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;    21          0021  1 !*                                                                           *
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;    23          0023  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT     *
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;    27          0027  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                   *
;    28          0028  1 !*                                                                           *
;    29          0029  1 !*                                                                           *
;    30          0030  1 !*****************************************************************************
;    31          0031  1 !
;    32          0032  1 !
;    33          0033  1 !++
;    34          0034  1 !
;    35          0035  1 ! FACILITY:  File dump utility
;    36          0036  1 !
;    37          0037  1 ! ABSTRACT:
;    38          0038  1 !       This module contains the routines to do the work of dumping files.
;    39          0039  1 !
;    40          0040  1 ! ENVIRONMENT:
;    41          0041  1 !       VAX native, user mode.
;    42          0042  1 !
;    43          0043  1 ! AUTHOR:  Benn Schreiber, Stephen Zalewski      CREATION DATE:  22-Jun-1981
;    44          0044  1 !
;    45          0045  1 ! MODIFIED BY:
;    46          0046  1 !
;    47          0047  1 !       V03-001 MLJ0033         Martin L. Jack, 23-Aug-1981  9:48
;    48          0048  1 !               Extensive rewriting to finish implementation.
;    49          0049  1 !
;    50          0050  1 !--
```

```
;    52          0051  1 LIBRARY 'SYS$LIBRARY:STARLET';
;    53          0052  1 REQUIRE 'SRC$:DUMPRE';
;    54          0168  1
;    55          0169  1
;    56          0170  1 FORWARD ROUTINE
;    57          0171  1     dump$fao_setup:     NOVALUE,        ! Set up FAO control strings
;    58          0172  1     dump$new_page:      NOVALUE,        ! Output new page
;    59          0173  1     dump$put_header:    NOVALUE,        ! Output heading lines
;    60          0174  1     dump$output_getmsg: NOVALUE,        ! Get message and output
;    61          0175  1     dump$blank_line:    NOVALUE,        ! Write blank line to listing file
;    62          0176  1     dump$put_line:      NOVALUE,        ! Output record, watching lines
;    63          0177  1     dump$dump_buffer:   NOVALUE;        ! Dump one record/block
;    64          0178  1
;    65          0179  1 EXTERNAL ROUTINE
;    66          0180  1     dump$fao_line:      NOVALUE,        ! Format one line
;    67          0181  1     dump$header:        NOVALUE,        ! Dump file header(s)
;    68          0182  1     dump$one_header,                    ! Dump block as a file header
;    69          0183  1     dump$read,                          ! Read from file
;    70          0184  1     dump$write:         NOVALUE,        ! Write to output file
;    71          0185  1     SYS$FAO;                            ! Formatted ASCII output routine
;    72          0186  1
;    73          0187  1 EXTERNAL
;    74          0188  1     dump$gl_flags : BBLOCK,             ! General flags
;    75          0189  1     dump$gl_outdesc : BBLOCK,           ! Output buffer descriptor
;    76          0190  1     dump$gl_idesc : BBLOCK,             ! Descriptor for input filename
;    77          0191  1     dump$gl_file_efblk,                 ! End of file block
;    78          0192  1     dump$gl_file_hiblk,                 ! Highest allocated block
;    79          0193  1     dump$gl_lpp,                        ! Number of lines per page
;    80          0194  1     dump$gl_ifab : REF BBLOCK,          ! Input FAB
;    81          0195  1     dump$gl_inam : REF BBLOCK,          ! Input NAM block
;    82          0196  1     dump$gl_cur_block,                  ! Current record/block
;    83          0197  1     dump$gl_max_block,                  ! Maximum record/block to dump
;    84          0198  1     dump$gl_width,                      ! Width of listing line
;    85          0199  1     dump$gl_number,                     ! Starting dump index number
;    86          0200  1     dump$gl_record,                     ! Record or block number
;    87          0201  1     dump$gq_time;                       ! Time at beginning of dump
;    88          0202  1
;    89          0203  1 EXTERNAL LITERAL
;    90          0204  1     dump$_facility,
;    91          0205  1     dump$_dumpofil,
;    92          0206  1     dump$_dumpodev,
;    93          0207  1     dump$_bn,
;    94          0208  1     dump$_lbn,
;    95          0209  1     dump$_vbn,
;    96          0210  1     dump$_fildnt,
;    97          0211  1     dump$_recno,
;    98          0212  1     dump$_header;
;    99          0213  1
;   100          0214  1 LITERAL
;   101          0215  1     max_fao_size = 40;                  ! Size of largest of faotables' expanded fao strings
;   102          0216  1
;   103          0217  1 OWN
;   104          0218  1     modeindex,                          ! Index into faotable
;   105          0219  1     dumpmode,                           ! mode for dump$fao_line
;   106          0220  1     entrysize,                          ! Size of one entry
;   107          0221  1     entsperline,                        ! Number of entries on one line
;   108          0222  1     linesthispage,                      ! Number of lines on this page
```

```
;  109          0223  1     dumpwidth,                          ! Width of one full dump listing line
;  110          0224  1     plinfaostring : BBLOCK[max_fao_size], ! FAO string for partial lines
;  111          0225  1     plinfaodesc : BBLOCK[dsc$c_s_bln]   ! Descriptor for partial line fao control string
;  112          0226  1                 INITIAL(max_fao_size,
;  113          0227  1                         plinfaostring),
;  114          0228  1     faoctrstring : BBLOCK[max_fao_size],! FAO control string
;  115          0229  1     faoctrdesc : BBLOCK[dsc$c_s_bln]    ! FAO control string descriptor
;  116          0230  1                 INITIAL(max_fao_size,
;  117          0231  1                         faoctrstring);
;  118          0232  1
;  119          0233  1 BIND
;  120          0234  1     sizetbl = UPLIT(BYTE(9,5,3,11,6,4,12,7,4)) : VECTOR[,BYTE],
;  121          0235  1     charsperbyte = UPLIT(BYTE(2,3,3)) : VECTOR[,BYTE], ! Number of ascii chars /byte based on radix
;  122          0236  1
;  123          0237  1     offtable = UPLIT(cstring('6XL'),    ! FAO control to print buffer offsets
;  124          0238  1                      cstring('6SL'),
;  125          0239  1                      cstring('6OL')) : VECTOR[,LONG],
;  126          0240  1
;  127          0241  1     faotable = UPLIT(cstring('9XL'),
;  128          0242  1                      cstring('5XW'),
;  129          0243  1                      cstring('3XB'),
;  130          0244  1                      cstring('11SL'),
;  131          0245  1                      cstring('6SW'),
;  132          0246  1                      cstring('4SB'),
;  133          0247  1                      cstring('12OL'),
;  134          0248  1                      cstring('7OW'),
;  135          0249  1                      cstring('4OB')) : VECTOR[,LONG],
;  136          0250  1
;  137          0251  1     sizetable = UPLIT(BYTE(                 ! Table to round entry's per
;  138          0252  1                            1,               ! line to nearest lower power
;  139          0253  1                            2,               ! of two.  Max length is 32.
;  140          0254  1                            4,
;  141          0255  1                            8,
;  142          0256  1                            16,
;  143          0257  1                            32,
;  144          0258  1                            64,
;  145          0259  1                            128)):VECTOR[,BYTE];
```

```
;  147     0260  1 GLOBAL ROUTINE dump$dump_file: NOVALUE=
;  148     0261  2 BEGIN
;  149     0262  2 !
;  150     0263  2 ! This routine is the driver for file dumping.
;  151     0264  2 !
;  152     0265  2 LOCAL
;  153     0266  2     status : BLOCK[4,BYTE],
;  154     0267  2     bufdesc : BBLOCK[dsc$c_s_bln],
;  155     0268  2     subdesc : BBLOCK[dsc$c_s_bln];              ! This desc is used to point to
;  156     0269  2                                                 ! each individual BLOCK/RECORD in bufdesc
;  157     0270  2
;  158     0271  2
;  159     0272  2 dump$fao_setup();                               ! Set up fao control string
;  160     0273  2 linesthispage = .dump$gl_lpp;                   ! Force new page
;  161     0274  2
;  162     0275  2
;  163     0276  2 IF .dump$gl_flags[dump$v_header]                ! If /HEADER specified
;  164     0277  2 THEN
;  165     0278  3     BEGIN
;  166     0279  3     dump$header();                              ! Dump the header
;  167     0280  3     linesthispage = .dump$gl_lpp;               ! Force new page
;  168     0281  2     END;
;  169     0282  2
;  170     0283  2
;  171     0284  2 ! Read and dump the file.
;  172     0285  2 !
;  173     0286  2 WHILE true DO
;  174     0287  3     BEGIN
;  175     0288  3     dump$gl_record = .dump$gl_record + 1;       ! Increment unit counter
;  176     0289  4     IF (NOT .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_rnd] ! If not disk
;  177     0290  4     OR .dump$gl_flags[dump$v_records])          ! or record mode
;  178     0291  3     AND .dump$gl_record GTRU .dump$gl_max_block ! Stop if already dumped last
;  179     0292  3         THEN RETURN;                            ! needed block
;  180     0293  3     status = dump$read(bufdesc);
;  181     0294  3     IF .status EQL ss$_endoffile THEN EXITLOOP;
;  182     0295  3     IF NOT .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_rnd]  ! If not disk
;  183     0296  3     OR .dump$gl_flags[dump$v_records]           ! or record mode
;  184     0297  3     THEN
;  185     0298  4         BEGIN
;  186     0299  4         IF .dump$gl_record GEQU .dump$gl_cur_block  ! In range to be dumped
;  187     0300  4         THEN
;  188     0301  5             BEGIN
;  189     0302  5             IF NOT .dump$gl_flags[dump$v_records]
;  190     0303  5                 THEN linesthispage = .dump$gl_lpp;  ! Force new page
;  191     0304  5             dump$dump_buffer(bufdesc, .status, false);  ! Dump entire block
;  192     0305  5             END
;  193     0306  4         END
;  194     0307  3     ELSE
;  195     0308  3         WHILE .bufdesc[dsc$w_length] GTRU 0 DO  ! Dump all blocks
;  196     0309  4             BEGIN
;  197     0310  4             subdesc[dsc$w_length] = MINU(512, .bufdesc[dsc$w_length]);
;  198     0311  4             subdesc[dsc$a_pointer] = .bufdesc[dsc$a_pointer];
;  199     0312  4             linesthispage = .dump$gl_lpp;
;  200     0313  4             dump$dump_buffer(subdesc, .status, false);      ! Dump a block
;  201     0314  4             status = ss$_normal;
;  202     0315  4             bufdesc[dsc$w_length] = .bufdesc[dsc$w_length] -
;  203     0316  4                 .subdesc[dsc$w_length];
```

```
;  204          0317  4              bufdesc[dsc$a_pointer] = .bufdesc[dsc$a_pointer] +
;  205          0318  4                  .subdesc[dsc$w_length];
;  206          0319  3              END;
;  207          0320  2          END;
;  208          0321  1 END;


                                                                .TITLE  DUMP$FILE
                                                                .IDENT  \V04-000\

                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                    04  07  0C  04  06  0B  03  05  09  00000 P.AAA:  .BYTE   9, 5, 3, 11, 6, 4, 12, 7, 4                ;
                                                    00009           .BLKB   3
                                    03  03  02  0000C P.AAB:  .BYTE   2, 3, 3
                                4C  58  36  03  0000F P.AAD:  .ASCII  <3>\6XL\                                        ;
                                4C  53  36  03  00013 P.AAE:  .ASCII  <3>\6SL\                                        ;
                                4C  4F  36  03  00017 P.AAF:  .ASCII  <3>\6OL\                                        ;
                                                    0001B           .BLKB   1
                        00000000' 00000000' 00000000'  0001C P.AAC:  .ADDRESS P.AAD, P.AAE, P.AAF
                                4C  58  39  03  00028 P.AAH:  .ASCII  <3>\9XL\                                        ;
                                57  58  35  03  0002C P.AAI:  .ASCII  <3>\5XW\                                        ;
                                42  58  33  03  00030 P.AAJ:  .ASCII  <3>\3XB\                                        ;
                            4C  53  31  31  04  00034 P.AAK:  .ASCII  <4>\11SL\                                       ;
                                57  53  36  03  00039 P.AAL:  .ASCII  <3>\6SW\                                        ;
                                42  53  34  03  0003D P.AAM:  .ASCII  <3>\4SB\                                        ;
                            4C  4F  32  31  04  00041 P.AAN:  .ASCII  <4>\12OL\                                       ;
                                57  4F  37  03  00046 P.AAO:  .ASCII  <3>\7OW\                                        ;
                                42  4F  34  03  0004A P.AAP:  .ASCII  <3>\4OB\                                        ;
                                                    0004E           .BLKB   2
00000000' 00000000' 00000000' 00000000' 00000000' 00000000'  00050 P.AAG:  .ADDRESS P.AAH, P.AAI, P.AAJ, P.AAK, P.AAL, -      ;
                    00000000' 00000000' 00000000'  00068                        P.AAM, P.AAN, P.AAO, P.AAP                    ;
                80  40  20  10  08  04  02  01  00074 P.AAQ:  .BYTE   1, 2, 4, 8, 16, 32, 64, -128                       ;

                                                                .PSECT  $OWN$,NOEXE,2

                                                    00000 MODEINDEX:
                                                                .BLKB   4
                                                    00004 DUMPMODE:
                                                                .BLKB   4
                                                    00008 ENTRYSIZE:
                                                                .BLKB   4
                                                    0000C ENTSPERLINE:
                                                                .BLKB   4
                                                    00010 LINESTHISPAGE:
                                                                .BLKB   4
                                                    00014 DUMPWIDTH:
                                                                .BLKB   4
                                                    00018 PLINFAOSTRING:
                                                                .BLKB   40
                                            00000028  00040 PLINFAODESC:
                                                                .LONG   40
                                            00000000' 00044         .ADDRESS PLINFAOSTRING                                ;
                                                    00048 FAOCTRSTRING:
                                                                .BLKB   40
                                            00000028  00070 FAOCTRDESC:
                                                                .LONG   40                                            ;
```

```
00000000' 00074          .ADDRESS FAOCTRSTRING                                  ;

                    SIZETBL=            P.AAA
                    CHARSPERBYTE=       P.AAB
                    OFFTABLE=           P.AAC
                    FAOTABLE=           P.AAG
                    SIZETABLE=          P.AAQ
                            .EXTRN  DUMP$FAO_LINE, DUMP$HEADER
                            .EXTRN  DUMP$ONE_HEADER
                            .EXTRN  DUMP$READ, DUMP$WRITE
                            .EXTRN  SYS$FAO, DUMP$GL_FLAGS
                            .EXTRN  DUMP$GL_OUTDESC
                            .EXTRN  DUMP$GL_IDESC, DUMP$GL_FILE_EFBLK
                            .EXTRN  DUMP$GL_FILE_HIBLK
                            .EXTRN  DUMP$GL_LPP, DUMP$GL_IFAB
                            .EXTRN  DUMP$GL_INAM, DUMP$GL_CUR_BLOCK
                            .EXTRN  DUMP$GL_MAX_BLOCK
                            .EXTRN  DUMP$GL_WIDTH, DUMP$GL_NUMBER
                            .EXTRN  DUMP$GL_RECORD, DUMP$GQ_TIME
                            .EXTRN  DUMP$_FACILITY, DUMP$_DUMPOFIL
                            .EXTRN  DUMP$_DUMPDEV, DUMP$_BN
                            .EXTRN  DUMP$_LBN, DUMP$_VBN
                            .EXTRN  DUMP$_FILDNT, DUMP$_RECNO
                            .EXTRN  DUMP$_HEADER

                            .PSECT  $CODE$,NOWRT,2

                    01FC 00000          .ENTRY  DUMP$DUMP_FILE, Save R2,R3,R4,R5,R6,R7,R8  ; 0260
                58 00000000V    EF  9E 00002    MOVAB   DUMP$DUMP_BUFFER, R8
                57 00000000G    00  9E 00009    MOVAB   DUMP$GL_IFAB, R7
                56 00000000G    00  9E 00010    MOVAB   DUMP$GL_RECORD, R6
                55 00000000G    00  9E 00017    MOVAB   DUMP$GL_FLAGS, R5
                54 00000000'    EF  9E 0001E    MOVAB   LINESTHISPAGE, R4
                53 00000000G    00  9E 00025    MOVAB   DUMP$GL_LPP, R3
                5E              10  C2 0002C    SUBL2   #16, SP
    00000000V   EF              00  FB 0002F    CALLS   #0, DUMP$FAO_SETUP                 ; 0272
                64              63  D0 00036    MOVL    DUMP$GL_LPP, LINESTHISPAGE         ; 0273
0A              65              06  E1 00039    BBC     #6, DUMP$GL_FLAGS, 1$              ; 0276
    00000000G   00              00  FB 0003D    CALLS   #0, DUMP$HEADER                    ; 0279
                64              63  D0 00044    MOVL    DUMP$GL_LPP, LINESTHISPAGE         ; 0280
                                66  D6 00047 1$: INCL    DUMP$GL_RECORD                     ; 0288
                50              67  D0 00049    MOVL    DUMP$GL_IFAB, R0                   ; 0289
05          43  A0              04  E1 0004C    BBC     #4, 67(R0), 2$
09          01  A5              05  E1 00051    BBC     #5, DUMP$GL_FLAGS+1, 3$            ; 0290
    00000000G   00              66  D1 00056 2$: CMPL    DUMP$GL_RECORD, DUMP$GL_MAX_BLOCK  ; 0291
                                7A  1A 0005D    BGTRU   8$
                        08      AE  9F 0005F 3$: PUSHAB  BUFDESC                           ; 0293
    00000000G   00              01  FB 00062    CALLS   #1, DUMP$READ
                52              50  D0 00069    MOVL    R0, STATUS
    00000870    8F              52  D1 0006C    CMPL    STATUS, #2160                      ; 0294
                                64  13 00073    BEQL    8$
                50              67  D0 00075    MOVL    DUMP$GL_IFAB, R0                   ; 0295
05          43  A0              04  E1 00078    BBC     #4, 67(R0), 4$
1D          01  A5              05  E1 0007D    BBC     #5, DUMP$GL_FLAGS+1, 6$            ; 0296
    00000000G   00              66  D1 00082 4$: CMPL    DUMP$GL_RECORD, DUMP$GL_CUR_BLOCK  ; 0299
                                BC  1F 00089    BLSSU   1$
03          01  A5              05  E0 0008B    BBS     #5, DUMP$GL_FLAGS+1, 5$            ; 0302
```

```
                64              63  D0 00090          MOVL    DUMP$GL_LPP, LINESTHISPAGE          ; 0303
                                7E  D4 00093 5$:      CLRL    -(SP)                               ; 0304
                                52  DD 00095          PUSHL   STATUS                              ;
                            10  AE  9F 00097          PUSHAB  BUFDESC                             ;
                68              03  FB 0009A          CALLS   #3, DUMP$DUMP_BUFFER                ;
                                A8  11 0009D          BRB     1$                                  ; 0298
                            08  AE  B5 0009F 6$:      TSTW    BUFDESC                             ; 0308
                                A3  13 000A2          BEQL    1$                                  ;
                50              08  AE  3C 000A4      MOVZWL  BUFDESC, R0                         ; 0310
          0200  8F                  50  B1 000A8      CMPW    R0, #512                            ;
                                    05  1B 000AD      BLEQU   7$                                  ;
                50          0200  8F  3C 000AF      MOVZWL  #512, R0                            ;
                6E                  50  B0 000B4 7$:  MOVW    R0, SUBDESC                         ;
          04    AE              0C  AE  D0 000B7      MOVL    BUFDESC+4, SUBDESC+4                ; 0311
                64                  63  D0 000BC      MOVL    DUMP$GL_LPP, LINESTHISPAGE          ; 0312
                                    7E  D4 000BF      CLRL    -(SP)                               ; 0313
                                    52  DD 000C1      PUSHL   STATUS                              ;
                                08  AE  9F 000C3      PUSHAB  SUBDESC                             ;
                68                  03  FB 000C6      CALLS   #3, DUMP$DUMP_BUFFER                ;
                52                  01  D0 000C9      MOVL    #1, STATUS                          ; 0314
          08    AE                  6E  A2 000CC      SUBW2   SUBDESC, BUFDESC                    ; 0316
          50                        6E  3C 000D0      MOVZWL  SUBDESC, R0                         ; 0318
          0C    AE                  50  C0 000D3      ADDL2   R0, BUFDESC+4                       ;
                                    C6  11 000D7      BRB     6$                                  ; 0308
                                        04 000D9 8$:  RET                                         ; 0321

; Routine Size:  218 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  210     0322  1 ROUTINE dump$fao_setup: NOVALUE=
;  211     0323  2 BEGIN
;  212     0324  2 !
;  213     0325  2 ! This routine sets up the FAO control string.  It also
;  214     0326  2 ! calculates the mode and entry widths.
;  215     0327  2 !
;  216     0328  2 LOCAL
;  217     0329  2     entry;
;  218     0330  2
;  219     0331  2 entry = 0;                                          ! used for entry size calc.
;  220     0332  2 dumpmode = 0;
;  221     0333  2 entrysize = 4;                                      ! Assume longword...
;  222     0334  2
;  223     0335  2 IF .dump$gl_flags[dump$v_decimal]
;  224     0336  2 THEN
;  225     0337  2     modeindex = 3
;  226     0338  2 ELSE IF .dump$gl_flags[dump$v_octal]
;  227     0339  2 THEN
;  228     0340  2     modeindex = 6
;  229     0341  2 ELSE
;  230     0342  2     modeindex = 0;                                  ! Default to hex dump
;  231     0343  2
;  232     0344  2
;  233     0345  2 IF .dump$gl_flags[dump$v_word]
;  234     0346  2 THEN
;  235     0347  3     BEGIN
;  236     0348  3     entrysize = 2;
;  237     0349  3     dumpmode = 1;
;  238     0350  3     modeindex = .modeindex + 1;
;  239     0351  3     END
;  240     0352  2 ELSE IF .dump$gl_flags[dump$v_byte]
;  241     0353  2 THEN
;  242     0354  3     BEGIN
;  243     0355  3     entrysize = 1;
;  244     0356  3     dumpmode = 2;
;  245     0357  3     modeindex = .modeindex + 2;
;  246     0358  2     END;
;  247     0359  2
;  248     0360  2
;  249     0361  2 ! Find entries per line and make it the nearest lower power of 2.
;  250     0362  2 !
;  251     0363  2 entsperline = ((.dump$gl_width - 5)/(.sizetbl[.modeindex]+.entrysize)) AND NOT 1;
;  252     0364  2
;  253     0365  2 IF .entsperline GTR 64                              ! Make sure entsperline is reasonable
;  254     0366  2 THEN SIGNAL_STOP(dump$_facility^16 + shr$_badlogic + sts$k_severe);
;  255     0367  2
;  256     0368  2 WHILE .entsperline GEQ .sizetable[.entry]           ! Find nearest larger power of 2
;  257     0369  2     DO entry = .entry + 1;                          ! from entsperline.
;  258     0370  2
;  259     0371  2 entsperline = .sizetable[.entry-1];                 ! Make entsperline nearest lower
;  260     0372  2                                                     ! power of two.
;  261     0373  2 dumpwidth = .entsperline*(.sizetbl[.modeindex] + .entrysize) + 8;
;  262     0374  2
;  263     0375  2 faoctrdesc[dsc$w_length] = max_fao_size;
;  264     0376  2 SYS$FAO(
;  265     0377  2     $descriptor('!!!ZL(!AC) !!!ZLAF !!!AC'),
;  266     0378  2     faoctrdesc,
```

```
;  267          0379  2      faoctrdesc,
;  268          0380  2      .entsperline,
;  269          0381  2      .faotable[.modeindex],
;  270          0382  2      .entsperline * .entrysize,
;  271          0383  2      .offtable[.modeindex/3]);
;  272          0384  2
;  273          0385  2
;  274          0386  2  ! Set up FAO control string to be used for partial lines.
;  275          0387  2  !
;  276          0388  2  SYS$FAO(
;  277          0389  2      $descriptor('!!!!!!ZL(!AC) !!!!!ZLAF !!!!!AC'),
;  278          0390  2      plinfaodesc,
;  279          0391  2      plinfaodesc,
;  280          0392  2      .faotable[.modeindex],
;  281          0393  2      .entsperline * .entrysize,
;  282          0394  2      .offtable[.modeindex/3]);
;  283          0395  1  END;


                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

5A 21 21 21 20 29 43 41 21 28 4C 5A 21 21 21  0007C P.AAS:  .ASCII  \!!!ZL(!AC) !!!ZLAF !!!AC\                    ;
                  43 41 21 21 21 20 46 41 4C  0008B                                                              ;
                                              00000018  00094 P.AAR:  .LONG   24                                  ;
                                              00000000' 00098         .ADDRESS P.AAS                              ;
21 20 29 43 41 21 28 4C 5A 21 21 21 21 21 21  0009C P.AAU:  .ASCII  \!!!!!!ZL(!AC) !!!!!ZLAF !!!!!AC\            ;
41 21 21 21 21 21 20 46 41 4C 5A 21 21 21 21  000AB                                                            ;
                                           43 000BA                                                           ;
                                              000BB         .BLKB   1                                           ;
                                              0000001F  000BC P.AAT:  .LONG   31                                  ;
                                              00000000' 000C0         .ADDRESS P.AAU                              ;


                                                        .PSECT  $CODE$,NOWRT,2

                                              007C 00000 DUMP$FAO_SETUP:
                                                        .WORD   Save R2,R3,R4,R5,R6                             ; 0322
                  56 00000000G   00   9E 00002          MOVAB   SYS$FAO, R6                                     ;
                  55 00000000G   00   9E 00009          MOVAB   DUMP$GL_FLAGS, R5                               ;
                  54 00000000'   EF   9E 00010          MOVAB   SIZETBL, R4                                     ;
                  53 00000000'   EF   9E 00017          MOVAB   MODEINDEX, R3                                   ;
                                 52   D4 0001E          CLRL    ENTRY                                           ; 0331
                        04       A3   D4 00020          CLRL    DUMPMODE                                        ; 0332
                     08 A3       04   D0 00023          MOVL    #4, ENTRYSIZE                                   ; 0333
05                      65       03   E1 00027          BBC     #3, DUMP$GL_FLAGS, 1$                           ; 0335
                        63       03   D0 0002B          MOVL    #3, MODEINDEX                                   ; 0337
                                 0C   11 0002E          BRB     3$                                              ;
05                   01 A5       02   E1 00030 1$:      BBC     #2, DUMP$GL_FLAGS+1, 2$                         ; 0338
                        63       06   D0 00035          MOVL    #6, MODEINDEX                                   ; 0340
                                 02   11 00038          BRB     3$                                              ;
                                 63   D4 0003A 2$:      CLRL    MODEINDEX                                       ; 0342
0C                   01 A5       06   E1 0003C 3$:      BBC     #6, DUMP$GL_FLAGS+1, 4$                         ; 0345
                     08 A3       02   D0 00041          MOVL    #2, ENTRYSIZE                                   ; 0348
                     04 A3       01   D0 00045          MOVL    #1, DUMPMODE                                    ; 0349
                                 63   D6 00049          INCL    MODEINDEX                                       ; 0350
```

```
                                          0F  11 0004B       BRB     5$                                          ; 0345
                  0B        65            02  E1 0004D 4$:   BBC     #2, DUMP$GL_FLAGS, 5$                       ; 0352
                       08   A3            01  D0 00051       MOVL    #1, ENTRYSIZE                               ; 0355
                       04   A3            02  D0 00055       MOVL    #2, DUMPMODE                                ; 0356
                            63            02  C0 00059       ADDL2   #2, MODEINDEX                               ; 0357
                  51 00000000G 00         05  C3 0005C 5$:   SUBL3   #5, DUMP$GL_WIDTH, R1                       ; 0363
                            50            64  9E 00064       MOVAB   SIZETBL, R0                                 ;
                            50      00 B340  9A 00067       MOVZBL  @MODEINDEX[R0], R0                          ;
                            50        08  A3  C0 0006C       ADDL2   ENTRYSIZE, R0                               ;
                            51            50  C6 00070       DIVL2   R0, R1                                      ;
              0C    A3      51            01  CB 00073       BICL3   #1, R1, ENTSPERLINE                         ;
                  00000040  8F        0C  A3  D1 00078       CMPL    ENTSPERLINE, #64                            ; 0365
                                          0D  15 00080       BLEQ    6$                                          ;
                           00000000*  8F  DD 00082       PUSHL   #<<<DUMP$_FACILITY@16>+4384>+4>            ; 0366
                  00000000G 00            01  FB 00088       CALLS   #1, LIB$STOP                                ;
   0C    A3      74 A442    08            00  ED 0008F 6$:   CMPZV   #0, #8, SIZETABLE[ENTRY], ENTSPERLINE       ; 0368
                                          04  14 00097       BGTR    7$                                          ;
                                          52  D6 00099       INCL    ENTRY                                       ; 0369
                                          F2  11 0009B       BRB     6$                                          ;
                       0C   A3      73 A442  9A 0009D 7$:   MOVZBL  SIZETABLE-1[ENTRY], ENTSPERLINE             ; 0371
                            52        0C  A3  D0 000A3       MOVL    ENTSPERLINE, R2                             ; 0373
                            51            63  D0 000A7       MOVL    MODEINDEX, R1                               ;
                            50          6441  9A 000AA       MOVZBL  SIZETBL[R1], R0                             ;
                            50        08  A3  C0 000AE       ADDL2   ENTRYSIZE, R0                               ;
                            50            52  C4 000B2       MULL2   R2, R0                                      ;
                       14   A3        08  A0  9E 000B5       MOVAB   8(R0), DUMPWIDTH                            ;
                       70   A3            28  B0 000BA       MOVW    #40, FAOCTRDESC                             ; 0375
                  50        51            03  C7 000BE       DIVL3   #3, R1, R0                                  ; 0383
                                    1C A440  DD 000C2       PUSHL   OFFTABLE[R0]                                ;
                  7E        52        08  A3  C5 000C6       MULL3   ENTRYSIZE, R2, -(SP)                        ; 0382
                                    50 A441  DD 000CB       PUSHL   FAOTABLE[R1]                                ; 0381
                                          52  DD 000CF       PUSHL   R2                                          ; 0380
                                      70  A3  9F 000D1       PUSHAB  FAOCTRDESC                                  ; 0376
                                      70  A3  9F 000D4       PUSHAB  FAOCTRDESC                                  ;
                                    0094  C4  9F 000D7       PUSHAB  P.AAR                                       ; 0377
                            66            07  FB 000DB       CALLS   #7, SYS$FAO                                 ;
                            51            63  D0 000DE       MOVL    MODEINDEX, R1                               ; 0394
                  50        51            03  C7 000E1       DIVL3   #3, R1, R0                                  ;
                                    1C A440  DD 000E5       PUSHL   OFFTABLE[R0]                                ;
                  7E   0C   A3        08  A3  C5 000E9       MULL3   ENTRYSIZE, ENTSPERLINE, -(SP)               ; 0393
                                    50 A441  DD 000EF       PUSHL   FAOTABLE[R1]                                ; 0392
                                      40  A3  9F 000F3       PUSHAB  PLINFAODESC                                 ; 0388
                                      40  A3  9F 000F6       PUSHAB  PLINFAODESC                                 ;
                                    00BC  C4  9F 000F9       PUSHAB  P.AAT                                       ; 0389
                            66            06  FB 000FD       CALLS   #6, SYS$FAO                                 ;
                                          04  00100          RET                                                 ; 0395

; Routine Size:  257 bytes,    Routine Base:  $CODE$ + 00DA
```

```
;  285          0396  1 ROUTINE dump$put_header(bufdesc,header): NOVALUE=
;  286          0397  2 BEGIN
;  287          0398  2 MAP
;  288          0399  2     bufdesc : REF BBLOCK;
;  289          0400  2
;  290          0401  2
;  291          0402  2 IF
;  292          0403  2     BEGIN
;  293          0404  2     IF .dump$gl_flags[dump$v_records]
;  294          0405  2     THEN
;  295          0406  2         .linesthispage + 4 GEQ .dump$gl_lpp
;  296          0407  2     ELSE
;  297          0408  2         true
;  298          0409  2     END
;  299          0410  2 THEN
;  300          0411  2     dump$new_page()
;  301          0412  2 ELSE
;  302          0413  2     dump$blank_line();
;  303          0414  2
;  304          0415  2
;  305          0416  2 IF NOT .header                                  ! Not dumping header
;  306          0417  2 THEN
;  307          0418  2     dump$output_getmsg(
;  308          0419  2         (IF .dump$gl_flags[dump$v_records]
;  309          0420  2             THEN dump$_recno
;  310          0421  2         ELSE IF NOT .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_rnd]
;  311          0422  2             THEN dump$_bn
;  312          0423  2         ELSE IF .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_for]
;  313          0424  2             THEN dump$_lbn
;  314          0425  2             ELSE dump$_vbn),
;  315          0426  2         %B'0001',
;  316          0427  2         .dump$gl_record,
;  317          0428  2         .bufdesc[dsc$w_length])
;  318          0429  2 ELSE
;  319          0430  2     dump$output_getmsg(dump$_header, %B'0001');
;  320          0431  2
;  321          0432  2 dump$blank_line();
;  322          0433  1 END;


                                    000C 00000 DUMP$PUT_HEADER:
                                                .WORD   Save R2,R3                                  ; 0396
                    53 00000000V    EF   9E 00002       MOVAB   DUMP$OUTPUT_GETMSG, R3              ;
                    52 00000000V    EF   9E 00009       MOVAB   DUMP$BLANK_LINE, R2
            11 00000000G    00      05   E1 00010       BBC     #5, DUMP$GL_FLAGS+1, 1$             ; 0404
            50 00000000'    EF      04   C1 00018       ADDL3   #4, LINESTHISPAGE, R0               ; 0406
               00000000G    00      50   D1 00020       CMPL    R0, DUMP$GL_LPP
                                    09   19 00027       BLSS    2$
               00000000V    EF      00   FB 00029 1$:   CALLS   #0, DUMP$NEW_PAGE                  ; 0411
                                    03   11 00030       BRB     3$
                    62              00   FB 00032 2$:   CALLS   #0, DUMP$BLANK_LINE                 ; 0413
                    4C          08  AC   E8 00035 3$:   BLBS    HEADER, 9$                          ; 0416
                    7E          04  BC   3C 00039       MOVZWL  @BUFDESC, -(SP)                     ; 0428
                        00000000G   00   DD 0003D       PUSHL   DUMP$GL_RECORD                      ; 0427
```

```
                                  01  DD 00043       PUSHL   #1                                    ; 0418
          08 00000000G  00        05  E1 00045       BBC     #5, DUMP$GL_FLAGS+1, 4$               ; 0419
                   00000000G      8F  DD 0004D       PUSHL   #DUMP$_RECNO                          ;
                                  2B  11 00053       BRB     8$                                    ;
                50 00000000G      00  D0 00055 4$:   MOVL    DUMP$GL_IFAB, R0                      ; 0421
          09        43            A0
                                  04  E0 0005C       BBS     #4, 67(R0), 5$                        ;
                50 00000000G      8F  D0 00061       MOVL    #DUMP$_BN, R0                         ;
                                  14  11 00068       BRB     7$                                    ;
                09          43    A0  E9 0006A 5$:   BLBC    67(R0), 6$                            ; 0423
                50 00000000G      8F  D0 0006E       MOVL    #DUMP$_LBN, R0                        ;
                                  07  11 00075       BRB     7$                                    ;
                50 00000000G      8F  D0 00077 6$:   MOVL    #DUMP$_VBN, R0                        ;
                                  50  DD 0007E 7$:   PUSHL   R0                                    ; 0421
                63                04  FB 00080 8$:   CALLS   #4, DUMP$OUTPUT_GETMSG                ; 0419
                                  0B  11 00083       BRB     10$                                   ; 0418
                                  01  DD 00085 9$:   PUSHL   #1                                    ; 0430
                   00000000G      8F  DD 00087       PUSHL   #DUMP$_HEADER                         ;
                63                02  FB 0008D       CALLS   #2, DUMP$OUTPUT_GETMSG                ;
                62                00  FB 00090 10$:  CALLS   #0, DUMP$BLANK_LINE                   ; 0432
                                      04 00093       RET                                           ; 0433

; Routine Size:  148 bytes,    Routine Base:  $CODE$ + 01DB
```

```
1 GLOBAL ROUTINE dump$new_page: NOVALUE=
2 BEGIN
2 !
2 ! Output a new page
2 !
2 linesthispage = 0;                                  ! Reset count of lines/page
2 dump$write($descriptor(%CHAR(%O'014')));            ! Output a form feed
2 IF .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_for]
2 OR NOT .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_fod]
2 THEN
3     BEGIN                                           ! Output "dump of device"
3     dump$output_getmsg(
3         dump$_dumpodev,
3         %B'0001',
3         dump$gl_idesc,
3         dump$gq_time);
3     END
2 ELSE
3     BEGIN                                           ! Output "dump of file"
3     dump$output_getmsg(
3         dump$_dumpofil,
3         %B'0001',
3         dump$gl_idesc,
3         dump$gq_time);
3     IF .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_rnd]
3     THEN
3         dump$output_getmsg(                         ! File ID and size
3             dump$_fildnt,
3             %B'0001',
3             .dump$gl_inam[nam$w_fid_num] + .dump$gl_inam[nam$b_fid_nmx]^16,
3             .dump$gl_inam[nam$w_fid_seq],
3             .dump$gl_inam[nam$b_fid_rvn],
3             .dump$gl_file_efblk,
3             .dump$gl_file_hiblk);
2     END;
2
2 dump$blank_line();
1 END;


                                        .PSECT   $PLIT$,NOWRT,NOEXE,2

             0C  000C4 P.AAW:           .ASCII   <12>                                      ;
                 000C5                  .BLKB    3
       00000001  000C8 P.AAV:           .LONG    1                                         ;
       00000000' 000CC                  .ADDRESS P.AAW                                     ;


                                        .PSECT   $CODE$,NOWRT,2

                003C 00000              .ENTRY   DUMP$NEW_PAGE, Save R2,R3,R4,R5           ; 0434
 55 00000000G  00  9E 00002             MOVAB    DUMP$GL_IDESC, R5                         ;
 54 00000000G  00  9E 00009             MOVAB    DUMP$GQ_TIME, R4                          ;
 53 00000000G  00  9E 00010             MOVAB    DUMP$GL_IFAB, R3                          ;
 52 00000000V  EF  9E 00017             MOVAB    DUMP$OUTPUT_GETMSG, R2                    ;
```

```
                    00000000'  EF   D4 0001E          CLRL    LINESTHISPAGE                          ; 0439
                    00000000'  EF   9F 00024          PUSHAB  P.AAV                                  ; 0440
          00000000G 00         01   FB 0002A          CALLS   #1, DUMP$WRITE                         ;
                    50         63   D0 00031          MOVL    DUMP$GL_IFAB, R0                       ; 0441
                    05     43  A0   E8 00034          BLBS    67(R0), 1$                             ;
                11  41     A0        06   E0 00038    BBS     #6, 65(R0), 2$                         ; 0442
                               54   DD 0003D 1$:       PUSHL   R4                                     ; 0445
                               55   DD 0003F          PUSHL   R5                                     ;
                               01   DD 00041          PUSHL   #1                                     ;
                    00000000G  8F   DD 00043          PUSHL   #DUMP$_DUMPODEV                        ;
                            62         04   FB 00049  CALLS   #4, DUMP$OUTPUT_GETMSG                ;
                               4C   11   0004C        BRB     3$                                     ; 0441
                               54   DD 0004E 2$:       PUSHL   R4                                     ; 0453
                               55   DD 00050          PUSHL   R5                                     ;
                               01   DD 00052          PUSHL   #1                                     ;
                    00000000G  8F   DD 00054          PUSHL   #DUMP$_DUMPOFIL                        ;
                            62         04   FB 0005A  CALLS   #4, DUMP$OUTPUT_GETMSG                ;
                            50         63   D0 0005D  MOVL    DUMP$GL_IFAB, R0                       ; 0458
                35  43     A0        04   E1 00060    BBC     #4, 67(R0), 3$                         ;
                    00000000G  00   DD 00065          PUSHL   DUMP$GL_FILE_HIBLK                     ; 0467
                    00000000G  00   DD 0006B          PUSHL   DUMP$GL_FILE_EFBLK                     ; 0466
                            50 00000000G  00   D0 00071  MOVL    DUMP$GL_INAM, R0                     ; 0465
                            7E     28  A0   9A 00078  MOVZBL  40(R0), -(SP)                         ;
                            7E     26  A0   3C 0007C  MOVZWL  38(R0), -(SP)                         ; 0464
                            51     24  A0   3C 00080  MOVZWL  36(R0), R1                            ; 0463
                            50     29  A0   9A 00084  MOVZBL  41(R0), R0                            ;
                50          50         10   78 00088  ASHL    #16, R0, R0                            ;
                                    6041   9F 0008C    PUSHAB  (R0)[R1]                               ;
                                    01   DD 0008F      PUSHL   #1                                     ; 0460
                    00000000G  8F   DD 00091          PUSHL   #DUMP$_FILDNT                          ;
                            62         07   FB 00097  CALLS   #7, DUMP$OUTPUT_GETMSG                ;
          00000000V EF              00   FB 0009A 3$:  CALLS   #0, DUMP$BLANK_LINE                   ; 0470
                                    04 000A1          RET                                            ; 0471

; Routine Size:  162 bytes,    Routine Base:  $CODE$ + 026F
```

```
;  363          0472  1 GLOBAL ROUTINE dump$output_getmsg(messageid,messageflags,args): NOVALUE=
;  364          0473  2 BEGIN
;  365          0474  2 !
;  366          0475  2 ! Routine to do a $GETMSG and then FAO and output it.
;  367          0476  2 !
;  368          0477  2 ! Inputs:
;  369          0478  2 !
;  370          0479  2 !       messageid       id of message
;  371          0480  2 !       messageflags    flags for GETMSG
;  372          0481  2 !       args            first of n args
;  373          0482  2 !
;  374          0483  2 LOCAL
;  375          0484  2     status,
;  376          0485  2     outbuf : BBLOCK[dump$c_maxlisiz],
;  377          0486  2     outbufdesc : BBLOCK[dsc$c_s_bln],
;  378          0487  2     faoctrbuf : BBLOCK[dump$c_maxlisiz],
;  379          0488  2     faoctrdesc : BBLOCK[dsc$c_s_bln];
;  380          0489  2
;  381          0490  2
;  382          0491  2 CH$FILL(0,dsc$c_s_bln,faoctrdesc);
;  383          0492  2 CH$FILL(0,dsc$c_s_bln,outbufdesc);
;  384          0493  2 faoctrdesc[dsc$w_length] = dump$c_maxlisiz;
;  385          0494  2 faoctrdesc[dsc$a_pointer] = faoctrbuf;
;  386          0495  2 outbufdesc[dsc$w_length] = dump$c_maxlisiz;
;  387          0496  2 outbufdesc[dsc$a_pointer] = outbuf;
;  388          0497  2
;  389          0498  2
;  390        P 0499  2 status = $GETMSG(
;  391        P 0500  2     msgid=.messageid,
;  392        P 0501  2     msglen=faoctrdesc,
;  393        P 0502  2     bufadr=faoctrdesc,
;  394          0503  2     flags=.messageflags);
;  395          0504  2 IF NOT .status
;  396          0505  2 THEN
;  397          0506  2     SIGNAL_STOP(dump$_facility^16 + shr$_badlogic + sts$k_severe);
;  398          0507  2
;  399          0508  2
;  400        P 0509  2 status = $FAOL(
;  401        P 0510  2     ctrstr=faoctrdesc,
;  402        P 0511  2     outbuf=outbufdesc,
;  403        P 0512  2     outlen=outbufdesc,
;  404          0513  2     prmlst=args);
;  405          0514  2 IF NOT .status
;  406          0515  2 THEN
;  407          0516  2     SIGNAL_STOP(dump$_facility^16 + shr$_badlogic + sts$k_severe);
;  408          0517  2
;  409          0518  2
;  410          0519  2 dump$put_line(outbufdesc);
;  411          0520  1 END;


                                                .EXTRN  SYS$GETMSG, SYS$FAOL

                                 007C 00000     .ENTRY  DUMP$OUTPUT_GETMSG, Save R2,R3,R4,R5,R6     ; 0472
                56 00000000G  00   9E 00002     MOVAB   LIB$STOP, R6                                ;
                5E      FEE8  CE   9E 00009     MOVAB   -280(SP), SP                                ;
```

```
                08              00              6E              00  2C 0000E        MOVC5   #0, (SP), #0, #8, FAOCTRDESC            ; 0491
                                                                6E     00013
                08              00              6E              00  2C 00014        MOVC5   #0, (SP), #0, #8, OUTBUFDESC            ; 0492
                                                        FF74    CD     00019
                                                6E       84     8F  9B 0001C        MOVZBW  #132, FAOCTRDESC                        ; 0493
                                          04    AE       08     AE  9E 00020        MOVAB   FAOCTRBUF, FAOCTRDESC+4                 ; 0494
                                        FF74    CD       84     8F  9B 00025        MOVZBW  #132, OUTBUFDESC                        ; 0495
                                        FF78    CD     FF7C     CD  9E 0002B        MOVAB   OUTBUF, OUTBUFDESC+4                    ; 0496
                                                                7E  D4 00032        CLRL    -(SP)                                   ; 0503
                                                          08    AC  DD 00034        PUSHL   MESSAGEFLAGS
                                                          08    AE  9F 00037        PUSHAB  FAOCTRDESC
                                                          0C    AE  9F 0003A        PUSHAB  FAOCTRDESC
                                                          04    AC  DD 0003D        PUSHL   MESSAGEID
                                        00000000G       00          05  FB 00040   CALLS   #5, SYS$GETMSG
                                                        52          50  D0 00047   MOVL    R0, STATUS
                                                        09          52  E8 0004A   BLBS    STATUS, 1$                              ; 0504
                                                00000000*       8F  DD 0004D        PUSHL   #<<<DUMP$_FACILITY@16>+4384>+4>         ; 0506
                                                        66          01  FB 00053   CALLS   #1, LIB$STOP
                                                          0C    AC  9F 00056 1$:    PUSHAB  ARGS                                    ; 0513
                                                        FF74    CD  9F 00059        PUSHAB  OUTBUFDESC
                                                        FF74    CD  9F 0005D        PUSHAB  OUTBUFDESC
                                                          0C    AE  9F 00061        PUSHAB  FAOCTRDESC
                                        00000000G       00          04  FB 00064   CALLS   #4, SYS$FAOL
                                                        52          50  D0 0006B   MOVL    R0, STATUS
                                                        09          52  E8 0006E   BLBS    STATUS, 2$                              ; 0514
                                                00000000*       8F  DD 00071        PUSHL   #<<<DUMP$_FACILITY@16>+4384>+4>         ; 0516
                                                        66          01  FB 00077   CALLS   #1, LIB$STOP
                                                        FF74    CD  9F 0007A 2$:    PUSHAB  OUTBUFDESC                              ; 0519
                                        00000000V       EF          01  FB 0007E   CALLS   #1, DUMP$PUT_LINE
                                                                    04  00085      RET                                             ; 0520

; Routine Size:  134 bytes,    Routine Base:  $CODE$ + 0311
```

```
;  413          0521  1 GLOBAL ROUTINE dump$blank_line: NOVALUE=
;  414          0522  2 BEGIN
;  415          0523  2 !
;  416          0524  2 ! Write blank line to listing file.
;  417          0525  2 !
;  418          0526  2 dump$put_line($descriptor(''));
;  419          0527  1 END;


                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

                                                000D0 P.AAY:    .BLKB   0                                        ;
                                       00000000 000D0 P.AAX:    .LONG   0                                        ;
                                       00000000' 000D4          .ADDRESS P.AAY                                   ;


                                                        .PSECT  $CODE$,NOWRT,2

                                                  0000 00000    .ENTRY  DUMP$BLANK_LINE, Save nothing            ; 0521
                                    00000000'   EF  9F 00002    PUSHAB  P.AAX                                    ; 0526
                          00000000V EF          01  FB 00008    CALLS   #1, DUMP$PUT_LINE                        ;
                                                04  0000F    RET                                              ; 0527

; Routine Size:  16 bytes,    Routine Base:  $CODE$ + 0397
```

```
;  421          0528  1 GLOBAL ROUTINE dump$put_line(desc): NOVALUE=
;  422          0529  2 BEGIN
;  423          0530  2 !
;  424          0531  2 ! This routine forces a page break if the lines per page is
;  425          0532  2 ! about to be exceeded, provided that the device is a disk.
;  426          0533  2 !
;  427          0534  2 IF .linesthispage GEQ .dump$gl_lpp                ! If lines per page exceeded
;  428          0535  2 AND .BBLOCK[dump$gl_ifab[fab$l_dev], dev$v_rnd] ! device is disk
;  429          0536  2 THEN
;  430          0537  2     dump$new_page();                               ! then new page
;  431          0538  2
;  432          0539  2
;  433          0540  2 dump$write(.desc);
;  434          0541  2 linesthispage = .linesthispage + 1;
;  435          0542  1 END;

                                    0004 00000         .ENTRY  DUMP$PUT_LINE, Save R2                  ; 0528
                    52 00000000'    EF   9E 00002      MOVAB   LINESTHISPAGE, R2                       ;
    00000000G       00              62   D1 00009      CMPL    LINESTHISPAGE, DUMP$GL_LPP              ; 0534
                                    11   19 00010      BLSS    1$                                      ;
                    50 00000000G    00   D0 00012      MOVL    DUMP$GL_IFAB, R0                        ; 0535
              05        43          A0   04 E1 00019   BBC     #4, 67(R0), 1$                          ;
                     FEA5           CF   00 FB 0001E   CALLS   #0, DUMP$NEW_PAGE                       ; 0537
                                 04     AC   DD 00023 1$: PUSHL   DESC                                  ; 0540
    00000000G       00              01   FB 00026      CALLS   #1, DUMP$WRITE                          ;
                                    62   D6 0002D      INCL    LINESTHISPAGE                           ; 0541
                                         04 0002F      RET                                             ; 0542

; Routine Size:  48 bytes,    Routine Base:  $CODE$ + 03A7
```

```
;  437     0543  1 GLOBAL ROUTINE dump$dump_buffer(bufdesc,status,header): NOVALUE=
;  438     0544  2 BEGIN
;  439     0545  2 !
;  440     0546  2 ! This routine does all the work of dumping the buffer.
;  441     0547  2 !
;  442     0548  2 MAP
;  443     0549  2     bufdesc : REF BBLOCK[dsc$c_s_bln];
;  444     0550  2 BIND
;  445     0551  2     buffer = .bufdesc[dsc$a_pointer] : VECTOR[,BYTE];
;  446     0552  2 LOCAL
;  447     0553  2     tempbuffer : BBLOCK[512],
;  448     0554  2     tempdesc : BBLOCK[dsc$c_s_bln],
;  449     0555  2     tempfaobuf : BBLOCK[max_fao_size],
;  450     0556  2     additional,
;  451     0557  2     padbytes,
;  452     0558  2     bufferpointer,
;  453     0559  2     faopointer,
;  454     0560  2     number,
;  455     0561  2     bytesperline,
;  456     0562  2     bytesleft,
;  457     0563  2     entsinbuf;
;  458     0564  2
;  459     0565  2 faopointer = faoctrdesc;                                ! Assume full line
;  460     0566  2 dump$put_header(.bufdesc, .header);
;  461     0567  2 IF NOT .status
;  462     0568  2 THEN
;  463     0569  3     BEGIN
;  464     0570  3     dump$output_getmsg(.status, %B'1111');              ! Put out error status
;  465     0571  3     dump$blank_line();
;  466     0572  2     END;
;  467     0573  2
;  468     0574  2 IF NOT .header
;  469     0575  2 AND .dump$gl_flags[dump$v_file_header]
;  470     0576  2 AND .bufdesc[dsc$w_length] EQL 512
;  471     0577  2 THEN
;  472     0578  2     IF dump$one_header(.bufdesc[dsc$a_pointer])
;  473     0579  2     THEN
;  474     0580  2         RETURN;
;  475     0581  2
;  476     0582  2
;  477     0583  2 number = 0;                                             ! Local index number
;  478     0584  2 bytesperline = .entsperline*.entrysize;
;  479     0585  4 entsinbuf = ((.bufdesc[dsc$w_length]+.entrysize-1)
;  480     0586  2                         AND NOT (.entrysize-1))/.entrysize;
;  481     0587  2 bytesleft = .bufdesc[dsc$w_length];
;  482     0588  2 IF NOT .dump$gl_flags[dump$v_number]                     ! If /NUMBER not used,
;  483     0589  2 THEN dump$gl_number = 0;                                ! start each at zero
;  484     0590  2
;  485     0591  2 WHILE .entsinbuf GTR 0 DO
;  486     0592  3     BEGIN
;  487     0593  3     IF .bytesleft LSSU .bytesperline
;  488     0594  3     THEN
;  489     0595  4         BEGIN
;  490     0596  4         CH$COPY(.bytesleft,buffer[.number],0,.bytesperline,tempbuffer); ! Copy partial line, zero fill to en
;  491     0597  4         tempdesc[dsc$w_length] = max_fao_size;                          ! Set up work area for parti
;  492     0598  4         tempdesc[dsc$a_pointer] = tempfaobuf;
;  493     0599  4         SYS$FAO(plinfaodesc,tempdesc,tempdesc,,entsinbuf);              ! Set up fao with # of entri
```

```
;  494          0600  4          faopointer = tempdesc;                                                  ! Use this fao control strin
;  495          0601  4          bufferpointer = tempbuffer;
;  496          0602  4          dump$gl_outdesc[dsc$w_length] = .dump$gl_width;                         ! Set output length to defau
;  497          0603  4          dump$fao_line(.bufferpointer,.entsperline,.entrysize,                   ! Format the output line
;  498          0604  4                  .dump$gl_number,.entsinbuf,.dumpmode,.faopointer,dump$gl_outdesc);
;  499          0605  4
;  500          0606  4
;  501          0607  4          ! Now that the partial line is ready to be written, suppress any
;  502          0608  4          ! leading zeros.
;  503          0609  4          !
;  504          0610  4          ! NOTE: Due to  the fact that RMS does reads on WORD offsets, the first
;  505          0611  4          !       leading byte of zeros will not be replaced if the dump is in
;  506          0612  4          !       block mode and ends up on a byte offset.
;  507          0613  4          !
;  508          0614  4          additional = 0;
;  509          0615  4          padbytes = .dumpwidth - .dump$gl_outdesc[dsc$w_length];                 ! Calculate padding (word offset)
;  510          0616  4          IF NOT .dump$gl_flags[dump$v_decimal]                                   ! If HEX or OCTAL dump
;  511          0617  4          THEN
;  512          0618  5              BEGIN                                                               ! calculate further padding if neces
;  513          0619  5              IF (additional = .bytesleft MOD .entrysize) GTR 0                   ! Find additional offset
;  514          0620  5              THEN additional = (.entrysize - .additional) *                      ! Customize it to type of dump
;  515          0621  5                                .charsperbyte[.modeindex/3] + 1;
;  516          0622  5              padbytes = .padbytes + .additional;
;  517          0623  4              END;
;  518          0624  4
;  519          0625  4          CH$MOVE(.dump$gl_outdesc[dsc$w_length] - .additional,
;  520          0626  4                  .dump$gl_outdesc[dsc$a_pointer] + .additional,
;  521          0627  4                  .dump$gl_outdesc[dsc$a_pointer] + .padbytes);
;  522          0628  4          CH$FILL(%C' ',.padbytes,.dump$gl_outdesc[dsc$a_pointer]);               ! Move blanks to pad areas
;  523          0629  4          dump$gl_outdesc[dsc$w_length] = .dumpwidth;                             ! Set output length to
;  524          0630  4          END                                                                     ! device type.
;  525          0631  3      ELSE
;  526          0632  4          BEGIN
;  527          0633  4          bufferpointer = buffer[.number];                                        ! Dump full line
;  528          0634  4          dump$gl_outdesc[dsc$w_length] = .dump$gl_width;                         ! Set output length to default value
;  529          0635  4          dump$fao_line(.bufferpointer,.entsperline,.entrysize,                   ! Format the output line
;  530          0636  4                  .dump$gl_number,.entsinbuf,.dumpmode,.faopointer,dump$gl_outdesc);
;  531          0637  3          END;
;  532          0638  3
;  533          0639  3          dump$put_line(dump$gl_outdesc);                                         ! Put line out to device
;  534          0640  3          number = .number + .bytesperline;                                ! Calculate next index
;  535          0641  3          IF .dump$gl_flags[dump$v_number]                                        ! If /NUMBER qualifier used
;  536          0642  3          THEN
;  537          0643  3              dump$gl_number = .dump$gl_number + .bytesperline                    ! then keep cumulative index,
;  538          0644  3          ELSE
;  539          0645  3              dump$gl_number = .number;                                           ! else make index local
;  540          0646  3          entsinbuf = .entsinbuf - .entsperline;                                  ! Update # of entry's in buffer
;  541          0647  3          bytesleft = .bytesleft - (.entsperline*.entrysize);                     ! Calculate how many bytes left in b
;  542          0648  2          END;
;  543          0649  1 END;


                                 0FFC 00000          .ENTRY  DUMP$DUMP_BUFFER, Save R2,R3,R4,R5,R6,R7,-  ; 0543
                                                             R8,R9,R10,R11                                  ;
```

```
                5E      FDC8    CE  9E 00002            MOVAB   -568(SP), SP
                52        04    AC  D0 00007            MOVL    BUFDESC, R2                                     ;  0551
                          04    A2  DD 0000B            PUSHL   4(R2)
                00000000'       EF  9F 0000E            PUSHAB  FAOCTRDESC                                      ;  0565
                          0C    AC  DD 00014            PUSHL   HEADER                                          ;  0566
                          52    DD  00017               PUSHL   R2
            FDE6  CF            02  FB 00019           CALLS   #2, DUMP$PUT_HEADER
                  0E      08    AC  E8 0001E            BLBS    STATUS, 1$                                      ;  0567
                          0F    DD  00022               PUSHL   #15                                             ;  0570
                          08    AC  DD 00024            PUSHL   STATUS
            FF0E  CF            02  FB 00027           CALLS   #2, DUMP$OUTPUT_GETMSG
              90  AF            00  FB 0002C           CALLS   #0, DUMP$BLANK_LINE                             ;  0571
                  1D      0C    AC  E8 00030 1$:        BLBS    HEADER, 2$                                      ;  0574
       15 00000000G   00        04  E1 00034           BBC     #4, DUMP$GL_FLAGS, 2$                           ;  0575
                0200  8F        62  B1 0003C           CMPW    (R2), #512                                      ;  0576
                          0E    12  00041               BNEQ    2$
                          04    A2  DD 00043            PUSHL   4(R2)                                           ;  0578
           00000000G   00        01  FB 00046           CALLS   #1, DUMP$ONE_HEADER
                  01            50  E9 0004D           BLBC    R0, 2$
                                04  00050               RET
                                5B  D4 00051 2$:        CLRL    NUMBER                                          ;  0583
                51 00000000'    EF  D0 00053           MOVL    ENTRYSIZE, R1                                   ;  0584
        5A 00000000'            EF  C5 0005A           MULL3   R1, ENTSPERLINE, BYTESPERLINE
                50              62  3C 00062           MOVZWL  (R2), R0                                        ;  0585
                52        FF A140   9E 00065           MOVAB   -1(R1)[R0], R2
                53        FF    A1  9E 0006A           MOVAB   -1(R1), R3                                      ;  0586
                52              53  CA 0006E           BICL2   R3, R2
           58                   52  C7 00071           DIVL3   R1, R2, ENTSINBUF
                59              50  D0 00075           MOVL    R0, BYTESLEFT                                   ;  0587
          06 00000000G   00      01  E0 00078           BBS     #1, DUMP$GL_FLAGS+1, 3$                         ;  0588
                      00000000G   00  D4 00080           CLRL    DUMP$GL_NUMBER                                  ;  0589
                                  58  D5 00086 3$:        TSTL    ENTSINBUF                                       ;  0591
                                  01  14 00088           BGTR    4$
                                      04 0008A           RET
                                5A        59  D1 0008B 4$:        CMPL    BYTESLEFT, BYTESPERLINE                 ;  0593
                                      03  1F 0008E           BLSSU   5$
                                    0DF   31 00090           BRW     8$
                                57    04  AE  D0 00093 5$:        MOVL    4(SP), R7                               ;  0596
        5A      00          6B47      59  2C 00097           MOVC5   BYTESLEFT, (NUMBER)[R7], #0, BYTESPERLINE, -
                                    40  AE       0009D                   TEMPBUFFER
                          38    AE        28  B0 0009F           MOVW    #40, TEMPDESC                           ;  0597
                          3C    AE    10  AE  9E 000A3           MOVAB   TEMPFAOBUF, TEMPDESC+4                  ;  0598
                                      58  DD 000A8           PUSHL   ENTSINBUF                               ;  0599
                                    3C    AE  9F 000AA           PUSHAB  TEMPDESC
                                    40    AE  9F 000AD           PUSHAB  TEMPDESC
                                00000000' EF  9F 000B0           PUSHAB  PLINFAODESC
                             00000000G  00    04 FB 000B6           CALLS   #4, SYS$FAO
                                    6E    38  AE 9E 000BD           MOVAB   TEMPDESC, FAOPOINTER                    ;  0600
                                08  AE    40  AE 9E 000C1           MOVAB   TEMPBUFFER, BUFFERPOINTER               ;  0601
                             00000000G  00 00000000G  00 B0 000C6           MOVW    DUMP$GL_WIDTH, DUMP$GL_OUTDESC  ;  0602
                                       00000000G  00 9F 000D1           PUSHAB  DUMP$GL_OUTDESC                 ;  0603
                                             04   AE DD 000D7           PUSHL   FAOPOINTER                      ;  0604
                                       00000000'  EF DD 000DA           PUSHL   DUMPMODE
                                                  58 DD 000E0           PUSHL   ENTSINBUF
                                       00000000G  00 DD 000E2           PUSHL   DUMP$GL_NUMBER
                                       00000000'  EF DD 000E8           PUSHL   ENTRYSIZE                       ;  0603
                                       00000000'  EF DD 000EE           PUSHL   ENTSPERLINE
```

```
                                        24    AE  DD 000F4          PUSHL   BUFFERPOINTER                                                    ;
                          00000000G     00        08 FB 000F7      CALLS   #8, DUMP$FAO_LINE                                                ;
                                                  56 D4 000FE      CLRL    ADDITIONAL                                                      ; 0614
                                        50 00000000G  00 3C 00100  MOVZWL  DUMP$GL_OUTDESC, R0                                             ; 0615
                    0C    AE 00000000'  EF        50 C3 00107      SUBL3   R0, DUMPWIDTH, PADBYTES                                         ;
                          35 00000000G  00        03 E0 00110      BBS     #3, DUMP$GL_FLAGS, 7$                                           ; 0616
                7E        00            59        01 7A 00118      EMUL    #1, BYTESLEFT, #0, -(SP)                                        ; 0619
                56        56            8E 00000000'  EF 7B 0011D  EDIV    ENTRYSIZE, (SP)+, ADDITIONAL, ADDITIONAL                        ;
                                                  56 D5 00126      TSTL    ADDITIONAL                                                      ;
                                                  1F 15 00128      BLEQ    6$                                                              ;
                          51 00000000'  EF        56 C3 0012A      SUBL3   ADDITIONAL, ENTRYSIZE, R1                                       ; 0620
                          52 00000000'  EF        03 C7 00132      DIVL3   #3, MODEINDEX, R2                                               ; 0621
                                        53 00000000'EF  42 9A 0013A  MOVZBL  CHARSPERBYTE[R2], R3                                           ;
                                        51        53 C4 00142      MULL2   R3, R1                                                          ;
                                        56  01    A1 9E 00145      MOVAB   1(R1), ADDITIONAL                                               ;
                            0C    AE            56 C0 00149 6$:    ADDL2   ADDITIONAL, PADBYTES                                            ; 0622
                                        50        56 C2 0014D 7$:    SUBL2   ADDITIONAL, R0                                                  ; 0625
                                        57 00000000G  00 D0 00150    MOVL    DUMP$GL_OUTDESC+4, R7                                           ; 0626
                    0C BE47       6647            50 28 00157      MOVC3   R0, (ADDITIONAL)[R7], @PADBYTES[R7]                             ; 0627
                0C    AE    20      6E            00 2C 0015E      MOVC5   #0, (SP), #32, PADBYTES, (R7)                                   ; 0628
                                                  67    00164                                                                             ;
                          00000000G  00 00000000'   EF B0 00165      MOVW    DUMPWIDTH, DUMP$GL_OUTDESC                                      ; 0629
                                                  3E 11 00170      BRB     9$                                                              ; 0593
                            08    AE      04 BE4B   9E 00172 8$:     MOVAB   @4(SP)[NUMBER], BUFFERPOINTER                                   ; 0633
                          00000000G  00 00000000G   00 B0 00178      MOVW    DUMP$GL_WIDTH, DUMP$GL_OUTDESC                                  ; 0634
                                        00000000G   00 9F 00183      PUSHAB  DUMP$GL_OUTDESC                                                 ; 0635
                                              04    AE DD 00189      PUSHL   FAOPOINTER                                                      ; 0636
                                        00000000'   EF DD 0018C      PUSHL   DUMPMODE                                                        ;
                                                    58 DD 00192      PUSHL   ENTSINBUF                                                       ;
                                        00000000G   00 DD 00194      PUSHL   DUMP$GL_NUMBER                                                  ;
                                        00000000'   EF DD 0019A      PUSHL   ENTRYSIZE                                                       ; 0635
                                        00000000'   EF DD 001A0      PUSHL   ENTSPERLINE                                                     ;
                                              24    AE DD 001A6      PUSHL   BUFFERPOINTER                                                   ;
                          00000000G     00        08 FB 001A9      CALLS   #8, DUMP$FAO_LINE                                               ;
                                        00000000G   00 9F 001B0 9$:    PUSHAB  DUMP$GL_OUTDESC                                                 ; 0639
                            FE15      CF            01 FB 001B6      CALLS   #1, DUMP$PUT_LINE                                               ;
                                      5B            5A C0 001BB      ADDL2   BYTESPERLINE, NUMBER                                            ; 0640
                    09 00000000G      00            01 E1 001BE      BBC     #1, DUMP$GL_FLAGS+1, 10$                                        ; 0641
                       00000000G      00            5A C0 001C6      ADDL2   BYTESPERLINE, DUMP$GL_NUMBER                                    ; 0643
                                                    07 11 001CD      BRB     11$                                                             ;
                          00000000G     00            5B D0 001CF 10$:   MOVL    NUMBER, DUMP$GL_NUMBER                                          ; 0645
                                      58 00000000'    EF C2 001D6 11$:   SUBL2   ENTSPERLINE, ENTSINBUF                                          ; 0646
                    50 00000000'      EF 00000000'    EF C5 001DD      MULL3   ENTRYSIZE, ENTSPERLINE, R0                                      ; 0647
                                      59            50 C2 001E9      SUBL2   R0, BYTESLEFT                                                   ;
                                                FE97  31 001EC         BRW     3$                                                              ; 0591
                                                      04 001EF         RET                                                                     ; 0649

; Routine Size:  496 bytes,    Routine Base:  $CODE$ + 03D7
```

```
;  545          0650  1 END
;  546          0651  0 ELUDOM



                                                        .EXTRN  LIB$STOP

;                               PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $OWN$                         120  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $PLIT$                        216  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                       1479  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)


;                           Library Statistics
;                                        -------- Symbols --------      Pages       Processing
;       File                             Total    Loaded   Percent      Mapped      Time
;
;  _$255$DUA28:[SYSLIB]STARLET.L32;1      9776        20         0       581         00:00.7



;                                       COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:DUMPFILE/OBJ=OBJ$:DUMPFILE MSRC$:DUMPFILE/UPDATE=(ENH$:DUMPFILE)

; Size:          1479 code + 336 data bytes
; Run Time:         00:14.7
; Elapsed Time:     00:58.9
; Lines/CPU Min:     2658
; Lexemes/CPU-Min: 23897
; Memory Used:  152 pages
; Compilation Complete
```

DTSMAIN
LIS

DUMP
LIS

DUMPFILE
LIS

DTSMSG
LIS

DTSPARSE
LIS

DTRTEST
LIS

DUMPFAOLN
LIS

DUMPREQ

DUMP

DUMP
MAP

DUMPHEADE
LIS

DTSAST
LIS

DTSTEST
LIS